Kashi Institute of Technology, Varanasi

(An Autonomous Institute Approved by AICTE)

Evaluation Scheme & Syllabus

For

Diploma 1st Year

(Mechanical Engineering)

(Effective from Session: 2025-26)

Diploma First Year, Semester-I

Mechanical Engineering

S.N.	Course Category	Course Code	Course Title	Type	Periods L	Periods T	Periods P	FA	SA	Total	Credit
					Evaluation Scheme						
1.	HS	DHS101	COMMUNICATION SKILL –I	T	2	0	0	70	30	100	2
2.	BS	DBS101	APPLIED MATHEMATICS-I	T	3	1	0	70	30	100	4
3.	BS	DBS103	APPIED PHYSICS	T	2	1	0	70	30	100	3
4.	PC	DMEPC101	BASICS OF MANUFACTURING SCIENCE & TECHNOLOGY	T	3	0	0	70	30	100	3
5.	ES	DES101	ENGINEERINGDRAWING	P	0	0	4	70	30	100	3
6.	ES	DES103	WORKSHOP PRACTICE –I	P	0	0	4	70	30	100	2
7.	HS	DHS103	COMMUNICATION SKILL –I LAB	P	0	0	2	70	30	100	1
8.	BS	DBS107	APPIED PHYSICS –I LAB	P	0	0	2	70	30	100	1
9.	PC	DMEPC103	BASIC OF MANUFACTURING SCIENCE & TECHNOLOGY LAB	P	0	0	2	70	30	100	1
10.	CCA	DCCA101	CO-CURRICULAR ACTIVITIES	-	-	-	-	-	-	100	0.5
11.	GP	DGP101	GENERAL PROFICIENCY	-	-	-	-	-	-	100	0.5
Total				-	10	2	14	630	270	1100	21

Diploma First Year, Semester-II

Mechanical Engineering

SN	Course Category	Course Code	Course Title	Type	Period L	Period T	Period P	FA	SA	Total	Credit
					Evaluation Scheme						
1.	BS	DBS102	APPLIED MATHEMATICS –II	T	3	1	0	70	30	100	4
2.	BS	DBS106	APPLIED CHEMISTRY	T	2	1	0	70	30	100	3
3.	ES	DES102	APPLIED MECHANICS	T	3	0	0	70	30	100	3
4.	ES	DES106	FUNDAMENTAL OF CIVIL AND ELECTRICAL ENGINEERING	T	3	0	0	70	30	100	3
5.	ES	DES114	WORKSHOP PRACTICE –II	P	0	0	8	70	30	100	2
6.	BS	DBS110	APPLIED CHEMISTRY LAB	P	0	0	2	70	30	100	1
7.	ES	DES116	APPLIED MECHANICS LAB	P	0	0	2	70	30	100	1
8.	ES	DES124	FUNDAMENTAL OF CIVIL AND ELECTRICAL ENGINEERING LAB	P	0	0	2	70	30	100	1
9.	ES	DES126	INTRODUCTION TO IT SYSTEMLAB	P	0	0	2	70	30	100	1
10.	CCA	DCCA102	CO-CURRICULAR ACTIVITIES	-	-	-	-	-	-	100	0.5
11.	GP	DGP102	GENERAL PROFICIENCY	-	-	-	-	-	-	100	0.5
Total				-	11	2	16	630	270	1100	20

FA: Formative Assessment, **SA**: Summative Assessment, **L**: Lecture, **T**- Tutorial, **P**: Practical

Abbreviation Used:

HS: Humanities, Social Science
ES: Engineering Science
BS: Basic Science
CS: Computer Science
PC: Program Course

DETAILED SYLLABUS
DIPLOMA 1St Year

- **Mechanical Engineering 1st Semester**

(Effective from Session: 2025-26)

Diploma in Mechanical Engineering					
Semester: I			Course Category: BS		
Course Code:	Course	Period / Week			Credit
		L	T	P	C
DHS101	**Communication Skills -I**	2	0	0	2
Prerequisite	After completion of the course students are able to -				**Bloom's Level**

			Bloom's Level
Course Outcome	**CO1**	*Introduce, converse, show interest and respond.*	K_1, K_3
	CO2	*Improve decisions through practical exercises, cases.*	K_3
	CO3	*Improve Reading skills*	K_3, K_5
	CO4	*Present, write effectively and give feedback.*	K_2, K_3
	CO5	*Improve his communication related to industry based.*	K_2, K_3

UNIT - I	**BASICS OF COMMUNICATION FOR CAREER DEVELOPMENT**	**Contact Hours: 6**
Meaning of Communication, Role and Scope of Communication, Barriers of Communication, Types of Communication, Process of Communication , Role of Communication in Corporate field.		**CO1**
UNIT – II	**APPLICATION OF GRAMMAR**	**Contact Hours: 6**
Verb, Tense, Active & Passive voice , Direct & Indirect speech.		**CO2**
UNIT – III	**READING SKILLS**	**Contact Hours: 6**
Unseen passage for comprehension (one word substitution, prefixes, suffixes, antonyms, synonyms etc. based upon the passage to be covered under this topic)		**CO3**
UNIT – IV	**WRITING SKILLS**	**Contact Hours: 6**
Email writing, Letter/Report writing, CV/Resume creation, paragraph writing, notice writing.		**CO4**
UNIT – V	**INTERVIEW SKILLS &SELF ANALYSIS**	**Contact Hours: 6**
Giving self Introduction , Telephonic Interviews ,Etiquettes to follow during an interview session , Swat analysis.		**CO5** **Contact Hours: 6**
Lecture Hour: 40 Tutorial Hour:00		**TOTAL 30**

Reference Books:
1. How to Win Friends and Influence People by Dale Carnegie Simon and Schuster, 1936. *2. Advance English Grammar by D.S. Paul* *3. Business Communication by M. Raman, Oxford University Press.* *4. Word Power Made by Easy by Norman Lewis* *5. 30 days to Better English by Norman Lewis* *6. Learn English Through Hindi*

Diploma in Mechanical Engineering					
Semester: **I**				Course Category :**BS**	
Course Code	Course	Period / Week			Credit
		L	T	P	C
DBS101	**Applied Mathematics I**	**3**	**1**	**0**	**4**
Prerequisite	***At the end of this course, the students will be able to:***				**Bloom's Level**
Course Outcome	**CO1**	*Understand the concept of Arithmetic mean and Geometric mean and linear equation.*			K_2
	CO2	*Apply dot & cross product of vectors to find the solution of engineering problems and Use complex numbers in various engineering problems.*			K_3,
	CO3	*Understand the concept of Relation between sides and angles of a triangle*			K_2
	CO4	*Apply differential calculus and higher order to solve engineering problems.*			K_3
	CO5	*Find velocity, acceleration, errors and approximation in engineering problems with application of derivatives.*			K_3,K_4
UNIT – I	**Algebra-I**				**Contact Hours : 12**
Arithmetic Mean: nth term, sum, Mean Geometric Mean: nth term, sum, Mean. Determinants: Elementary properties of determinants of order 2 and 3, system of linear equations and solution, Cramer`s Rule.					**CO1**
UNIT – II	**Algebra-II**				**Contact Hours : 12**
Vector Algebra: Dot and cross product, Scalar and vector triplet product. Complex Numbers: Representation, Modulus and Amplitude. De-Moivre theorem application in solving algebraic equations.					**CO2**
UNIT – III	**Trigonometry**				**Contact Hours :12**
Relation between sides and angles of a triangle: Statementof various formula showing relationship between sides and angles of a triangle.					**CO3**
UNIT – IV	**Differential Calculus-I**				**Contact Hours : 12**
Functions, limits, continuity, elementary methods of finding limit (right and left)Method of finding derivatives, functions of a function, Logarithmic Differentiation.					**CO4**
UNIT – V	**Differential Calculus-II**				**Contact Hours :12**
Higher order derivativesDerivatives of Special Functions (Exponential, Logarithmic, and Inverse circular functions).					**CO5**
Lecture Hours :45		**Tutorials Hours :15**			**Total :60**
Reference Books:					
1. *Elementary Engineering Mathematics by BS Grewal, Khanna Publishers, New Delhi* 2. *Engineering Mathematics, Vol I & II by SS Sastry, Prentice Hall of India Pvt. Ltd.,* 3. *Applied Mathematics-I by Chauhan and Chauhan, Krishna Publications, Meerut.*					
Text Book 1. *Applied Mathematics-I (A) by Kailash Sinha and Varun Kumar; Aarti Publication, Meerut*					

Diploma in Mechanical Engineering						
Semester: **I**				Course Category: **BS**		
Course Code	Course		Period / Week			Credit
			L	T	P	C
DBS103	**Applied Physics**		2	1	0	3
Prerequisite	***At the end of this course, the students will be able to:***					**Bloom's Level**
Course Outcome	**CO1**	*Understanding the concept of measurement of physical quantity and units*				K_2
	CO2	*State and explain Newton's first law of motion, Identify the give example of (types of) forces, Compare and contrast speed, velocity and acceleration.*				$K_1, K_4, K_2,$
	CO3	*Understand the concept of work and how to calculate the work done by force. Understand the concept of the net work done on an object and how that relates to a change in speed of the object. Understand the concept of power .*				K_2, K_3
	CO4	*In this unit on matter, students learn to differentiate physical and chemical changes in matter. They also learn that matter is made up of small particles called atoms and molecules.*				K_2, K_4
	CO5	*Ability to understand the basic concepts of thermodynamics such as temperature, pressure, system, properties, process, state, cycle and equilibrium.*				$K_2,, K_5$

UNIT – I	**Unit and Dimensions**	**Contact Hours : 08**
1.1 Need of Measurement in engineering and science, unit of a physical quantities - fundamental and derived units, systems of units (FPS, CGS and SI units) 1.2 Dimensions and dimensional formulae of physical quantities. 1.3 Principle of homogeneity of dimensions 1.4 Limitation of dimensional analysis 1.5 Accuracy and precision of instruments, rules for representing significant figures in calculation.		**CO1**

UNIT – II	**Force and Motion**	**Contact Hours : 08**
2.1 Scalar and vector quantities – examples, representation of vector, types of vectors 2.2 Addition and Subtraction of Vectors, Triangle and Parallelogram law (Statement only), Scalar and Vector Product. 2.3 Resolution of Vectors. 2.4 Force, Momentum, Statement and Derivation of Conservation of linear momentum, its applications such as recoil of gun. 2.5 Circular motion (Uniform and Non-uniform), definition of angular displacement, angular velocity, angular acceleration, frequency, time period. 2.6 Relation between linear and angular velocity, linear acceleration and angular acceleration (related numerical) 2.7 Central force, Expression and Applications of Centripetal and centrifugal forces.		**CO2**

UNIT – III	**Work, Power and Energy**	**Contact Hours :8**
3.1 Work: and its units, examples of zero work, positive work and negative work, Conservative and non-conservative force. 3.2 Friction: modern concept, types, laws of limiting friction, Coefficient of friction 3.3 Work done in moving an object on horizontal and inclined plane for rough and plane surfaces with its applications 3.4 Energy and its units: Kinetic energy and potential energy with examples and their derivation, Work energy theorem. 3.6 Power and its units, calculation of power in numerical problems.		**CO3**

UNIT – IV	Properties of Matter	Contact Hours : 08
4.1 Elasticity: definition of stress and strain, different types of modulii of elasticity, Hooke's law, significance of stress strain curve. 4.2 Pressure: definition, its units, atmospheric pressure, gauge pressure, absolute Pressure. 4.3 Surface tension: concept, its units, angle of contact. 4.4 Viscosity and coefficient of viscosity: Terminal velocity, Stokes's law and effect of temperature on viscosity, application in hydraulic systems. 4.5 Concept of fluid motion, stream line and turbulent flow, Equation of continuity, Bernoulli's Theorem and their applications.		CO4
UNIT – V	Heat and Thermodynamic	Contact Hours : 08
5.1 Difference between heat and temperature. 5.2 Modes of transfer of heat (Conduction, convection and radiation with examples). 5.3 Different scales of temperature and their relationship. 5.4 Isothermal and Adiabatic process. 5.5 Zeroth, First and second law of thermodynamics, Heat engine (concept Only), Carnot cycle.		CO5
Lecture Hours :30	Tutorials Hours :10	Total :40

Reference Books:
1   Text Book of Physics for Class XI (Part-I, Part-II); N.C.E.R.T., Delhi
2   Concepts in Physics by HC Verma, Vol. I & II, Bharti Bhawan Ltd. New Delhi
3   Comprehensive Practical Physics, Vol, I & II, JN Jaiswal, Laxmi Publications (P) Ltd., New Delhi
4   Engineering Physics by PV Naik, Pearson Education Pvt. Ltd, New Delhi
5   Engineering Physics by DK Bhhatacharya& Poonam Tandan; Oxford University Press, New Delhi

Diploma in Mechanical Engineering						
Semester: **I**				Course Category: **PC**		
Course Code	Course		Period / Week			Credit
			L	T	P	C
DMEPC101	**Basics of Manufacturing Science And Technology**		**3**	**0**	**0**	**3**
Prerequisite	*At the end of this course, the students will be able to:*					**Bloom's Level**
Course Outcome	**CO1**	*Study of basic concept of manufacturing process.*				K_2, K_4
	CO2	*Study and Inspect various welding& types of welding processes.*				K_2, K_5
	CO3	*Study principle of operations of modern welding processes.*				K_3, K_4
	CO4	*Study the basic concept of jigs and fixture used in engineering field.*				K_2, K_3
	CO5	*Study of basic concepts of sheet metal and their processes.*				K_2, K_3
UNIT – I	**Introduction**					**Contact Hours:08**
Importance of manufacturing. Economic & technological considerations in manufacturing. Classification of manufacturing processes. Materials & manufacturing processes for common items.						**CO 1**
UNIT – II	**Welding Process**					**Contact Hours:08**
Principle of welding, Classification of welding processes, Advantages and limitations of welding, Industrial applications of welding, Welding positions and techniques, symbols. Safety precautions in welding.						**CO 2**
UNIT – III	**Casting (Foundry)**					**Contact Hours:08**
Basic principle & survey of casting processes. Types of patterns and allowances. Types and propertiesof moulding sand, sand testing. Elements of mould and design considerations, Gating, Riser, Runners,Core. Solidification of casting,. Sand casting, defects & remedies and inspection etc.						**CO 3**
UNIT – IV	**Jigs & Fixtures**					**Contact Hours:08**
Locating & Clamping devices & principles. Jigs and Fixtures and its applications						**CO 4**
UNIT – V	**Sheet Metal working**					**Contact Hours:08**
Presses and their classification die & punch assembly and press work methods and processes. Cutting/Punching mechanism, Blanking vs. Piercing. Compound vs. Progressive die.						**CO 5**
Lecture Hours: 40		**Tutorial Hour: 00**				**Total Hours: 40**
Reference Books:						
1. Manufacturing Science by Ghosh and Mallik *2. Production Engg. Science by P.C. Pandey* *3. Manufacturing Engineering & Technology by Kalpakjian, Pearson* *4. Manufacturing Technology by P.N. Rao., TMH* *5. Manufacturing Processes by Shan, Pearson.* *6. Manufacturing Processes foe Engineering materials by Kalpakjian, Pearson* *7. Materials and Manufacturing by Paul Degarmo.*						

	Diploma in Mechanical Engineering				
Semester: **I**			Course Categor: **ES**		
Course Code	Course	Period / Week			Credit
		L	T	P	C
DES101	**Engineering Drawing**	**1**	**0**	**4**	**3**
Prerequisite	*At the end of this course, the students will be able to:*				**Bloom's Level**
Course Outcome	**CO1**	*Study & identify the different types engineering drawing instruments and different grades of pencil used in drafting and drafting of free hand lettering.*			K_2, K_4
	CO2	*Study & sketching of different types of dimensioning methods and scaling.*			K_2, K_3
	CO3	*Study & sketching of orthographic and isometric projection with the help of mini drafter.*			K_3, K_4, K_5
	CO4	*An over view of Common Symbols and Conventions used in civil & electrical engineering.*			K_2, K_3
	CO5	*Introduction to AutoCAD and operational instructions of various commands in AutoCAD and making of at least 3sheets of various solid sections (cube, cuboids, cone, sphere etc.) using AutoCAD.*			K_3, K_5, K_6

UNIT – I	**Introduction of Engineering Drawing**	**No. of sheets:03**
Introduction to drawing instruments, materials, layout and sizes of drawing sheets and drawing boards. Practice of vertical, horizontal and inclined lines, geometrical figures such as triangles, rectangles, circles, ellipses and curves, hexagonal, pentagon with the help of drawing instruments. Free hand lettering (Alphabet and numerals) upper case (Capital Letter), single stroke, vertical and inclined at 75 degree, series of 5mm of free hand lettering of height 25 mm in the ratio of 7:4.		**CO1**
UNIT – II	**Dimensioning Technique& Scales**	**No. of sheets: 04**
Necessity of dimensioning, method and principles of dimensioning,dimensioning of overall sizes, circles, threaded holes, chamfered surfaces, angles, tapered surfaces, holes, Scales their needs and importance, type of scales, definition of R.F. and length of scale, drawing of plain and diagonal scales.		**CO2**
UNIT – III	**Orthographic & Isometric Projection**	**No. of sheets: 08**
Theory of orthographic projections, Projection of Points in different quadrant, Projection of Straight Line parallel, perpendicular & inclined to any one of the reference plane, Projection of Plane Different lamina like rectangular, triangular and circle, parallel and perpendicular tothe plane, orthographic projection of different objects, fundamentals of isometric projections, isometric views of combination of regular solids like cylinder, cone, cube and prism. To make projections, Top view, Front view and Side view of various types of Solids.		**CO3**
UNIT – IV	**Symbols used in engineering**	**No. of sheets: 03**
Civil Engineering sanitary fitting symbols, Electrical fitting symbols for domestic interior installations.		**CO4**
***UNIT – V**	**Introduction to CAD software**	**No. of sheets: 02**
Basic introduction of CAD software (AutoCAD) and operational instructions of various commands in AutoCAD. At least two sheets on AutoCAD of cube, cone, pyramid, sphere and combination of above solids.		**CO5**

***Auto CAD drawing will be evaluated internally by Formative Assessment marks.**
Total no of sheets making: 20

Reference Books:

1. *A Text Book of Engineering Drawing by Surjit Singh; Dhanpat Rai & Co., Delhi*
2. *Engineering Drawing by PS Gill; SK Kataria& Sons, New Delhi*
3. *Elementary Engineering Drawing in First Angle Projection by ND Bhatt; Charotar Publishing House Pvt. Ltd., Anand*
4. *Engineering Drawing I & II by JS Layall; Eagle Parkashan, Jalandhar*
5. *Engineering Drawing I by DK Goel, GBD Publication.*

Diploma in Mechanical Engineering						
Semester: **I**				Course Category: **ES**		
Course Code	Course		Period / Week			Credit
			L	T	P	C
DES103	**Workshop Practice – I Lab**		**0**	**0**	**4**	**2**
Prerequisite	*At the end of this course, the students will be able to:*						**Bloom's Level**

Course Outcome	**CO1**	*Identify tools and equipment used and their respective functions.*	K_1, K_2, K_4
	CO2	*Identify different types of materials and their basic properties.* *Use and take measurements with the help of basic measuring tools/equipment.*	$K_2, K3, K_5$
	CO3	*Select proper tools for a particular operation.* *Select materials, tools, and sequence of operations to make a job as per given specification/drawing.*	K_3, K_4, K_5
	CO4	*Prepare simple jobs independently and inspect the same.* *Follow safety procedures and precautionary measures.*	$K5, K_3,$
	CO5	*Use safety equipment and Personal Protection Equipment.*	$K_3,, K_6$

UNIT – I	CARPENTRY SHOP

1.1 General Shop Talk 1.1.1 Name and use of raw materials used in carpentry shop : wood &alternative materials 1.1.2 Names, uses, care and maintenance of hand tools such as different types of Saws, C-Clamp, Chisels, Mallets, Carpenter's vices, Marking gauges,Try-squares, Rulers and other commonly used tools and materials used in carpentry shop by segregating as cutting tools, supporting tools, holding tools , measuring tools etc. 1.1.3 Specification of tools used in carpentry shop. 1.1.4 Different types of Timbers, their properties, uses & defects. 1.1.5 Seasoning of wood. 1.2. Practice 1.2.1 Practices for Basic Carpentry Work 1.2.2 Sawing practice using different types of saws 1.2.3 Assembling jack plane — Planning practice including sharpening of jackplane cutter 1.2.4 Chiselling practice using different types of chisels including sharpening of chisel 1.2.5 Making of different types of wooden pin and fixing methods. Marking measuring and inspection of jobs. 1.3 Job Practice Job 1 Marking, sawing, planning and chiselling and their practice Job II Half Lap Joint (cross, L or T−any one) Job III Mortise and Tenon joint (T-Joint) Job IV Dove tail Joint (Lap or Bridle Joint)	**CO1**

UNIT – II	PAINTING AND POLISHING SHOP

2.1. Introduction of paints, varnishes, Reason for surface preparation, Advantages ofPainting, other method of surface coating ie. Electroplating etc. 2.2. Job Practice Job 1: To prepare a wooden surface for painting apply primer on one side and to paint the same side. To prepare french polish for wooden surface and polish the other side. Job II: To prepare metal surface for painting, apply primer and paint the same. Job III: To prepare a metal surface for spray painting, first spray primer and paint the same by spray painting gun and compressor system. The sequence of polishing will be as follows: i) Abrasive cutting by leather wheel ii) Polishing with hard cotton wheel and with polishing material iii) Buffing with cotton wheel or buff wheel.	**CO2**

UNIT – III	ELECTRICAL SHOP	
3.1 Study, demonstration and identification of common electrical materials with standard ratings and specifications such as wires, cables, switches, fuses, cleats, clamps and allied items, tools and accessories. 3.2 Study of electrical safety measures and protective devices. Job I Identification of phase, Neutral and Earth wires for connection to domestic electrical appliances and their connections to three pin plugs. Job II Carrying out house wiring circuits using fuse, switches, sockets, ceiling rose etc. in batten or P.V.C. casing-caping. 3.3 Study of common electrical appliances such as auto electric iron, electric kettle, ceiling/table fan, desert cooler etc. 3.4 Introduction to the construction of lead acid battery and its working. Job III Installation of battery and connecting two or three batteries in series and parallel. 3.5 Introduction to battery charger and its functioning. Job IV Charging a battery and testing with hydrometer and celltester		CO3
UNIT – IV	SMITHY SHOP	
4.1. General Shop Talk 4.1.1 Purpose of Smithy shop 4.1.2 Different types of Hearths used in Smithy shop 4.1.3 Purpose, specifications, uses, care and maintenance of various tools and equipments used in hand forging by segregating as cutting tools, supporting tools, holding tools, measuring tools etc. 4.1.4 Types of fuel used and maximum temperature obtained 4.1.5 Types of raw materials used in Smithy shop 4.1.6 Uses of Fire Bricks & Clays in Forging workshop. 4.2 Practice 4.2.1 Practice of firing of hearth/Furnace, Cleaning of Clinkers and Temperature Control of Fire. 4.2.2 Practice on different basic Smithy/Forging operations such as Cutting, Upsetting, Drawing down, Setting down, Necking, Bending, Fullering,Swaging, Punching and Drifting		CO4
UNIT – V	PLUMBING SHOP	
5.1. Use of personal protective equipments, safety precautions while working andcleaning of shop. 5.2. Introduction and demonstration of tools, equipment and machines used inplumbing shop. 5.3. Introduction of various pipes and pipe fittings of elbow, nipple, socket, union etc. 5.4. Job Practice Job 1 : Preparation of job using elbow, bend and nipple Job II: Preparation of job using Union, Tap, Plug and Socket. Job III: Threading practice on pipe with die		CO5

Reference Books:

1. *Workshop Technology Vol. I, II, III by Manchanda; India Publishing House, Jalandhar.*
2. *Workshop Training Manual Vol. I, II by S.S. Ubhi; Katson Publishers, Ludhiana.*
3. *Manual on Workshop Practice by K Venkata Reddy; MacMillan India Ltd., New Delhi*
4. *Basic Workshop Practice Manual by T Jeyapoovan; Vikas Publishing House (P) Ltd., New Delhi*
5. *Workshop Technology by B.S. Raghuwanshi; Dhanpat Rai and Co., New Delhi*
6. *Workshop Technology by HS Bawa; Tata McGraw Hill Publishers, New Delhi.*

Diploma in Mechanical Engineering

Semester: I			Course Category : HS		
Course Code	Course	Period/Week			Credit
		L	T	P	C
DHS103	**Communication Skill – I Lab**	0	0	2	1

Prerequisite	*At the end of this course, the students will be able to:*	
Course Outcome	CO1	*Able to speak correctly in a grammatical form*
	CO2	*Improvement o f Listening ability*
	CO3	*Write various types of paragraphs, notices for different purposes and composition on picture with appropriate format*
	CO4	*Reproduce and match words and sentences in a paragraph*
	CO5	*Understand the importance of effective communication*

List of practical:

1. Listening and Speaking Exercises	**CO1**
2. Self and peer introduction	
3. Newspaper Reading	**CO2**
4. Just a minute session - Extempore	
5. Greeting and starting a conversation	**CO3**
6. Discuss about likes and dislikes	
7. Group Discussion	**CO4**
8. Mock Interviews Practice	
9. Short story telling (Moral and Brief Summary)	**CO5**
10. Enrichment of English Vocabulary	

Diploma in Mechanical Engineering					
Semester: I			**Course Category: ES**		
Course Code	Course	Period/Week			Credit
		L	T	P	C
DBS107	**Applied Physics Lab**	**0**	**0**	**2**	**1**
Prerequisite	*At the end of this course, the students will be able to:*				
Course Outcome	**CO1**	*Understand the concept of rotational motion of a rigid body and its applications*			
	CO2	*Describe conservation of energy and its applications*			
	CO3	*Express physical work in term of heat and temperature; Measure temperature in various processes on different scales (Celsius, Kelvin, Fahrenheit etc.)*			
	CO4	*Distinguish between conduction, convection and radiation, identify the different methods for reducing heat losses*			
	CO5	*Understand the laws of thermodynamics, Carnot cycle and their applications.*			

List of practical:	
1. To find radius of wire and its volume and the maximum permissible error in the quantities by using both vernier calipers and screw gauge. 2. To find the value of acceleration due to gravity on the surface of earth by using a simple pendulum.	**CO1**
3. To determine the atmospheric pressure at a place using Fortin's Barometer. 4. To verify parallelogram law of forces.	**CO2**
5. To study conservation of energy of a ball or cylinder rolling down an inclined plane. 6. To find the Moment of Inertia of a flywheel about its axis of rotation.	**CO3**
7. To determine the viscosity of glycerin by Stoke's method.	**CO4**
8. To determine the force constant of the spring using Hook's law.	**CO5**

Diploma in Mechanical Engineering					
Semester: **I**			Course Category: **PC**		
Course Code	Course	Period/Week			Credit
		L	T	P	C
DMEPC103	**BMST Laboratory**	**0**	**0**	**2**	**1**
Prerequisite	*At the end of this course, the students will be able to:*				
Course Outcome	**CO1**	*Identify different types of materials and their basic properties.*			
	CO2	*Select proper tools for a particular operation.*			
	CO3	*Identify tools and equipment used and their respective functions.*			
	CO4	*Follow safety procedures and precautionary measures.*			
	CO5	*Use safety equipment and Personal Protection Equipment.*			

List of practical:

1. To perform Bolt (thread) making on Lathe machine.	**CO1**
2. To perform Finishing of a surface on surface-grinding machine	**CO2**
3. To perform Drilling holes on drilling machine and study of twist-drill.	**CO3**
4. To perform Experiment on jigs/Fixtures and its uses.	**CO4**
5. To perform Gas welding experiment.	**CO5**
6. To perform Arc welding experiment.	**CO5**
7. To study different types of flame in gas welding experiment.	**CO5**

DETAILED SYLLABUS
DIPLOMA 1st Year

- **Mechanical Engineering 2nd Semester**

(Effective from Session: 2025-26)

Diploma in Mechanical Engineering					
Semester: **II**			Course Category: **BS**		
Course Code	Course	Period / Week			Credit
		L	T	P	C
DBS102	**APPLIED MATHEMATICS-II**	3	1	0	4
Prerequisite	*At the end of this course, the students will be able to:*				**Bloom's Level**
Course Outcome	**CO1**	*Calculate simple integration by methods of integration.*			K_3, K_4
	CO2	*Evaluate the area under curves, surface by using definite integrals.*			K_2, K_3
	CO3	*Solve the engineering problems with numerical methods .*			K_3
	CO4	*Explain the function of the system components including Processor, Motherboard and Input-output devices.*			K_2
	CO5	*Understand the geometric shapes used in engineering problems by co-ordinate geometry.*			K_2, K_3

UNIT – I	**Integral Calculus - I**	**Contact Hours : 12**
(i) Methods of Indefinite Integration : (ii) Integration by substitution. (iii) Integration by rational functions. (iv) Integration by partial function. (v) Integration by parts.		**CO1**

UNIT – II	**Integral Calculus - II**	**Contact Hours : 12**
Meaning and properties of definite integrals, Evaluation of definite integrals. Simposns 1/3rd and Simposns3/8th rule and Trapezoidal Rule : their application in simple cases.		**CO2**

UNIT – III	**Numerical solutions**	**Contact Hours :12**
Numerical solutions of algebraic equations; Bisections method, Regula Falsi method, Newton-Raphson's method(without proof), Numerical solutions of simultaneous equations; Gauss elimination method(without proof).		**CO3**

UNIT – IV	**Co-ordinate Geometry (2 Dimension)**	**Contact Hours :12**
Equation of circle in standard form. Centre - Radius form, Diameter form, Two intercept form.		**CO4**

UNIT – V	**Co-ordinate Geometry (3 Dimension)**	**Contact Hours :12**
Straight lines and planes in space. Distance between two points in space, direction cosine and direction ratios, Finding equation of a straight line (without proof).		**CO5**

Lecture Hours :45	**Tutorials Hours :15**	**Total :60**

Reference Books:

1. *Applied Mathematics-II by Ajay Kumar ,Jai Prakash Nath Publication Merrut.*
2. *Applied Mathematics-II by H.R. Luthera, Bharat Bharati Publication Merrut*
3. *Applied Mathematics-II by Kailash Sinha , BBP Publication,Merrut*

Diploma in Mechanical Engineering						
Semester: **II**				Course Category: **BS**		
Course Code	Course		Period / Week			Credit
		L	T	P		C
DBS106	**Applied Chemistry**	2	1	0		3
Prerequisite	*At the end of this course, the students will be able to:*					**Bloom's Level**
Course Outcome	**CO1**	*Describe the three subatomic particles in an atom. Explain the differences between protons, neutrons, and electrons. Recap the characteristics of elements in the Periodic table. Differentiate between polar and non polar covalent*				K_1, K_2
	CO2	*Developing the basic idea about lubricant and also help us to understand the different sources of water.*				K_2, K_3, K_5
	CO3	*Student will be able to define water. Explain the role of water for human and plants. Discuss and explain water cycle.*				K_2
	CO4	*Identify the primary oxidation and reduction reaction for corrosion. Differentiate between general corrosion and localized corrosion.*				K_2, K_4
	CO5	*Understand how the thermodynamic of organic reaction define the direction and kinetics define the rate at which they proceed. Provides important information regarding Molecular weight, Glass transition temperature &Crystallization of Polymers.*				K_1, K_2, K_6
UNIT – I	**Atomic structure, Periodic Table and Chemical Bonding**					**Contact Hours : 08**
1. Fundamental particles- mass and charges of electrons, protons and neutrons. 2. Bohr's model of atom and limitations. 3. Atomic number, atomic mass number isotopes and isobars. 4. Definition of orbit and orbitals, shapes of s and p orbitals only, 5. Aufbau's principle, Hund's rules. Electronic configuration of elements with atomic number (Z) = 20 only. 6. Chemical bonding – General introduction about ionic bond & covalent bonds						**CO1**
UNIT – II	**Fuels and Lubricants**					**Contact Hours :08**
2.1 .Definition& Classification of fuels, characteristics of good fuel. 2.2 Calorific value-higher calorific value, lower calorific value, determination of calorific value of solid or liquid fuel using Bomb calorimeter and numerical examples. Coal - types of coal and proximate analysis of coal. Gaseous fuels –chemical composition, and applications of natural gas (CNG), LPG, Lubricants: Definition properties and industrial applications						**CO2**
UNIT – III	**Water**					**Contact Hours :08**
Hard water, types of hardness, causes of hardness, units of hardness– mg per liter (mgL^{-1}) and part per million (ppm) and simple numerical, Disadvantages caused by the use of hard water in domestic and boiler feed water. Primming and foaming and caustic embrittlement in boilers.Removal of hardness - Permutit process.						**CO3**
UNIT – IV	**Corrosion and its Control**					**Contact Hours :08**

1. Definition of corrosion. Redox Reaction.
 2. Theories of
     1. Dry (chemical) corrosion- Pilling Bedworth rule
     2. Wet corrosion in acidic atmosphere by hydrogen evolution mechanism
     3. Corrosion control:
						CO4

1. Metal coatings – Zn (Sherardizing), Electroplating 2. Organic coatings - use of paints, varnishes.		
UNIT – V	**Organic compound, Polymers and Plastics periods**	**Contact Hours : 08**
1. Definition of polymer, monomer and degree of polymerization 2. Brief introduction to addition and condensation polymers with suitable examples (PE, PVC, Teflon, Nylon -66 and Bakelite) 3. Thermo plastics and thermo setting plastics.		**CO 5**
Lecture Hours : 30	**Tutorials Hours :10**	**Total :40**

Reference Books:

1 Pradeep's New Course Chemistry for class XII (Vol I and II)

2 Modern's ABC of Chemistry Class - 12 (Part 1 & 2)

3 Concise Inorganic Chemistry

4 Modern Approach to Chemical Calculations

Diploma in Mechanical Engineering					
Semester: II			Course Category: ES		
Course Code	Course	Period / Week			Credit
		L	T	P	C
DES102	**Applied Mechanics**	**3**	**0**	**0**	**3**
Prerequisite	*At the end of this course, the students will be able to:*				**Bloom's Level**
Course Outcome	**CO1**	*Discuss various types of units and their conversion from one to another.*			K_2
	CO2	*Analyze different types of forces acting on a body and draw free body diagrams.*			K_4
	CO3	*Study &Calculation of moments*			K_3
	CO4	*Calculate the co-efficient of friction for different types of surfaces.*			K_3
	CO5	*Determine the centroid /centre of gravity of plain and composite laminar and solid bodies.*			K_3
UNIT – I	**Introduction**				**Contact Hours : 08**
Concept of engineering mechanics definition of mechanics, statics, dynamics, Definition of Applied Mechanics Different systems of units (FPS, CGS, MKS and SI) and their conversion from one to another for density, force, pressure, work, power, velocity, acceleration Concept of rigid body,.Definition of effort, velocity ratio, mechanical advantage and efficiency of amachine and their relationship, law of machines.					**CO1**
UNIT – II	**Laws of forces**				**Contact Hours :08**
Definition of force, measurement of force in SI units, its representation, types offorce: Point force/concentrated force & Uniformly distributed force, effects offorce, characteristics of a forceDifferent force systems (coplanar and non-coplanar), principle of transmissibility of forces, Composition and resolution of coplanar concurrent forces, resultant force, methodof composition of forces, laws of forces, triangle law of forces, polygon law offorces - graphically, analytically, resolution of forces, resolving a force into tworectangular componentsLami's theorem (concept only)Type of Load, supports, Beams- analysis for simply supported, cantilever beams[Simple problems on above topics]					**CO 2**
UNIT – III	**Concept of moment**				**Contact Hours : 08**
Moment of a force and units of momentPrinciple of moment and its applications(Levers – simple and compound, steel yard, safety valve, reaction at support)Parallel forces (like and unlike parallel force), Concept of couple, its properties and effects[Simple problems on the above topics]					**CO3**
UNIT – IV	**Friction**				**Contact Hours : 08**
Definition and concept of friction, types of friction, force of frictionLaws of static friction, coefficient of friction, angle of friction, angle of repose,cone of friction. Equilibrium of a body lying on a horizontal plane, equilibrium of a body lying ona rough inclined plane. Calculation of least force required to maintain equilibrium of a body on a rough inclined plane subjected to a force.					**CO4**
UNIT – V	**Centre of Gravity**				**Contact Hours : 08**
Concept, definition of centroid of plain figures and centre of gravity ofsymmetrical solid bodiesDetermination of centroid of plain and composite lamina using moment method only,					**CO5**

centroid of bodies with removed portion Determination of center of gravity of solid bodies – cone, cylinder, hemisphereand sphere; composite bodies and bodies with portion removed.		
Lecture Hours :40	**Tutorials Hours :00**	**Total :40**

Reference Books:
1. A Text Book of Applied Mechanics by S Ramamurtham,Dhanpat Rai Publishing Co. Ltd.
2. A Text Book of Engineering Mechanics (Applied Mechanics) by RK Khurmi; S Chandand Co. Ltd., New Delhi.
3. A Text Book of Applied Mechanics by RK Rajput; Laxmi Publications, New Delhi..
4. Text Book of Applied Mechanics by Birinder Singh, Kaption Publishing House, NewDelhi.
5. Test Book of Applied Mechanics by AK Upadhya, SK Kataria& Sons, New Delhi

Diploma in Mechanical Engineering				
Semester: II			Course Categor: ES	
Course Code	Course	Period / Week		Credit
		L	T	P	C
DES106	**Fundamental of Civil & Electrical Engineering**	3	0	0	3
Prerequisite	*At the end of this course, the students will be able to:*			**Bloom's Level**
Course Outcome	**CO1**	*Identify different construction materials and check their quality.*		K_2, K_5
	CO2	*Determine the bearing capacity of soils and select suitable foundations for heavy installations and machineries.*		K_1, K_5
	CO3	*Identify various types of concrete and check its quality.*		K_3, K_5
	CO4	*Determine voltage-current relationship in a DC circuit under specific physical conditions. Verify Kirchhoff's Current and Voltage Laws in a dc circuit.* *Verify DC circuits (Thevenin and Norton Theorem)*		K_2, K_4
	CO5	*Measure power and power factor in a single phase R-L-C Circuit and calculation of active and reactive powers in the circuit.*		K_2, K_5

CIVIL PART		
UNIT – I	**Construction Materials**	**Contact Hours : 08**
Properties and uses of various construction materials such as stones, bricks, lime, content and timber with their properties, physical/field testing, elements of brick masonry.		**CO1**
UNIT – II	**Foundations**	**Contact Hours : 08**
Bearing capacity of soil and its importance, Types of various foundations and their salient features, suitability of various foundations for heavy, light and vibrating machines.		**CO 2**
UNIT – III	**Concrete**	**Contact Hours : 08**
Various ingredients of concrete, different grades of concrete, water cement ratio, workability, physical/field testing of concrete, mixing of concrete, placing and curing of concrete		**CO 3**
ELECTRICAL PART		
UNIT – IV	**Overview of DC Circuits & DC Circuit Theorems**	**Contact Hours :08**
Definition of basic terms, such as current, EMF, Potential Difference (PD); Ohm's Law and its limitations; Factors affecting resistors and capacitors; simple problems on series and parallel combinations of resistors with their wattage considerations. Application of Kirchhoff's current law and Kirchhoff's voltage law to simple circuits. Star – Delta connections and their conversion. Thevenin's theorem, Norton's theorem, application of network theorems in solving D.C. circuit problems.		**CO 4**
UNIT – V	**AC Fundamentals**	**Contact Hours :08**
Concept of alternating quantities Difference between ac and dc Concepts of: cycle, frequency, time period, amplitude, instantaneous value, average value, r.m.s. value, maximum value, form factor and peak factor. Representation of sinusoidal quantities by phasor diagrams. Equation of sinusoidal wave form for an alternating quantity and its derivation Effect of alternating voltage applied to a pure r¹e³s⁷istance, pure inductance and pure		**CO 5**

capacitance.		
Lecture Hours : 40	**Tutorials Hours :00**	**Total : 40**

Reference Books:

1. *Civil Engineering Materials by SV Deodhar and Singhai; Khanna Publishers, New Delhi*

2. *Concrete Technology by J.Jha and Sinha; Khanna Publishers, Delhi*

3. *Textbook of Concrete Technology 2nd Edition, by Kulkarni, PD Ghosh TK and Phull, YR; New Age International(P) Ltd, Publishers, New Delhi*
4. *Materials of Construction by Ghosh; Tata McGraw Hill Publishing Co. Ltd., New Delhi*
5. *Basic Electrical Engineering by Asfaque Husain, Jain Book Depot, New Delhi*
6. *Basic Electrical Engineering by JB Gupta; SK Kataria and Sons, New Delhi.*
7. *Basic Electrical Engineering by PS Dhogal, Tata McGraw-Hill Education Pvt Ltd., New Delhi.*

Diploma in Mechanical Engineering					
Semester: II			Course Category: **ES**		
Course Code	Course	Period / Week			Credit
		L	T	P	C
DES114	**Workshop Practice –II Lab**	**0**	**0**	**8**	**2**
Prerequisite	At the end of this course, the students will be able to:				
Course Outcome	**CO1**	*Identify tools and equipment used and their respective functions.*			
	CO2	*Identify different types of materials and their basic properties.*			
	CO3	*Identify different types of materials and their basic properties.*			
	CO4	*Use and take measurements with the help of basic measuring tools/equipment.*			
	CO5	*Select proper tools for a particular operation.*			
List of experiment					
CO1	**1. FITTING SHOP** 1.1 Use of personal protective equipment and safety precautions while working. 1.2 Basic deburring processes. 1.3 Introduction to fitting shop tools, marking and measuring devices/equipment. 1.4 Identification of materials. (Iron, Copper, Stainless Steel, Aluminium etc.) 1.5 Identification of various steel sections (flat, angle, channel, bar etc.). 1.6 Introduction to various fitting shop operations/processes (Hacksawing, Drilling, Chipping and Filing). 1.7 Job Practice. Job I Marking of job, use of marking tools, filing and use of measuring instruments. (Vernier caliper, Micrometer and Vernier height gauge). JobII Filing a rectangular/square piece to maintain dimensions within an accuracy of ±.25 mm. Job III Making a cut-out from a square piece of MS flat using hand hacksaw and chipping Job IV Drilling and tapping practice on MS Flat.				
CO2	**2. SHEET METAL SHOP** 2.1 Introduction to sheet metal shop, use of hand tools and accessories e.g. different types of hammers, hard and soft mallet, sheet and wire gauge, necessary allowance required during job fabrication, selection of material. 2.2 Introduction and demonstration of hand tools used in sheet metal shop. 2.3 Introduction and demonstration of various machines and equipment used in sheet metal shop e.g. Shearing Machine, Bar Folder, Burring Machine, 2.4 Introduction and demonstration of various raw materials used in sheet metal shop e.g. black-plain sheet, galvanized-iron plain sheet, galvanised corrugated sheet, aluminium sheet etc. 2.5 Study of various types of nuts, bolts, rivets, screws etc. 2.6 Job Practice Job I: Shearing practice on a sheet using hand shears. Job II: Practice on making Single riveted lap joint/Double riveted lap Joint. Job III: Practice on making Single cover plate chain type, zig-zag type and single rivetted Butt Joint.				

CO3	**3 WELDING SHOP – I** 3.1 Introduction and importance of welding as compared to other material joining processes. Specifications and type of welding machines, classification and coding of electrodes, welding parameters, welding joints and welding positions. Materials to be welded, safety precautions. 3.2 Job Practice Job I Practice of striking arc (Minimum 4 beads on 100 mm long M.S. flat). Job II Practice of depositing beads on plate at different current levels. (Minimum 4 beads on M.S. plate at four setting of current level). Job III Preparation of lap joint using arc welding process. Job IV Preparation of T-joint using gas welding or arc welding on 100 mm x 6 mm MS Flat
CO4	**4 FOUNDRY SHOP** 4.1 Study of metal and non metals .2Study and Sketch of the Foundry tools 4.3 Study and sketch of Cupola and pit furnace 4.4 To prepare green moulding sand and to prepare moulds (single piece and double piece pattern sweep mould) 4.5.Casting of non ferrous (lead or aluminium)
CO5	**5 MACHINE SHOP** 5.1 Study and sketch of lathe machine 5.2 Study and Sketch of grinders, milling machine, drilling machine and CNC machine. 5.3 Plain and step turning and knurling practice. 5.4 Study and sketch of planning/shaping machine and to plane a rectangle of cast iron.

Diploma in Mechanical Engineering					
Semester: **II**			Course Category: **BS**		
Course Code	Course	Period / Week			Credit
		L	T	P	C
DBS110	**Applied Chemistry Lab**	**0**	**0**	**2**	**1**
Prerequisite	*At the end of this course, the students will be able to:*				
Course Outcome	**CO1**	*Total hardness of water can be estimated by titrating a sample of water with EDTA salt solution in presence of NH4Cl–NH4OH*			
	CO2	*The alkalinity of water can be determined by titrating the water sample with Sulphuric acid of known values of pH, volume and concentration.*			
	CO3	*Proximate analysis determines fixed carbon, volatile matter, moisture, and ash content, while ultimate analysis identifies the carbon, hydrogen, nitrogen, sulphur, and oxygen composition of solid fuels.*			
	CO4	*The permanent hardness of water can be removed by O' Hener's Method.*			
	CO5	*We can easily determined the flash and fire point of given lubricant oil by using Able's flash point apparatus..*			
List of experiment					
CO 1	1. Estimation of total hardness of water using standard EDTA solution. 2. Calibration of Analytical Apparatus.				
CO 2	3. Estimation of total alkalinity of given water sample by titrating it against standard sulfuric acid solution.				
CO 3	4. Proximate analysis of solid fuel. 5. Preparation of Standard Solution of KMnO4 or NaCl.				
CO 4	6. Estimation of temporary hardness of water sample by O' Hener's Method. 7. Determination of Viscosity of given solution by Viscometer.				
CO 5	8. Determination of flash and fire point of given lubricating oil using Able's flash point apparatus. 9. Determination of surface tension of given liquid by Stalagmometer.				

Diploma in Mechanical Engineering					
Semester: **II**			Course Category: ES		
Course Code	Course	Period / Week			Credit
		L	T	P	C
DES116	**APPLIED MECHANICS LAB**	**0**	**0**	**2**	**1**
Prerequisite	*At the end of this course, the students will be able to:*				
Course Outcome	**CO1**	*Analyze different types of forces acting on a body*			
	CO2	*Analyze reaction at the supports of a simply supported beam.*			
	CO3	*Determine velocity ratio, mechanical advantage and efficiency of simple machines*			
	CO4	*Determine the centroid/centre of gravity of plain and composite laminar and solid bodies.*			
	CO5	*Determine velocity ratio, mechanical advantage and efficiency of simple machines*			

List of experiment		
Any 7 of the following experiment:-		
1	Verification of the polygon law of forces using gravesend apparatus.	**CO1**
2	To study the forces in different members of jib crane.	
3	To verify the reaction at the supports of a simply supported beam.	**CO2**
4	To find the mechanical advantage, velocity ratio and efficiency in case of an inclined plane.	
5	To find the mechanical advantage, velocity ratio and efficiency of a screw jack.	**CO3**
6	To find the mechanical advantage, velocity ratio and efficiency of worm and worm wheel.	**CO4**
7	To find mechanical advantage, velocity ratio and efficiency of single purchase crab.	
8	To find out center of gravity of regular lamina.	**CO5**
9	To find out center of gravity of irregular lamina.	

Diploma in Mechanical Engineering					
Semester: **II**			Course Category: **ES**		
Course Code	**Course**	Period/Week			Credit
		L	T	P	C
DES118	**Fundamental of Civil & Electrical Engineering Laboratory**	0	0	2	1
Prerequisite	*At the end of this course, the students will be able to:*				
Course Outcome	**CO1**	*Identify various types of Brick and check its quality.*			
	CO2	*Identify various types of concrete and check its quality*			
	CO3	*Application of different types of bearings*			
	CO4	*Verify Kirchhoff's Current and Voltage Laws in a dc circuit.* *Verify DC circuits (Thevenin and Norton Theorem)*			
	CO5	*Measure power and power factor in a single phase R-L-C Circuit and calculation of active and reactive powers in the circuit.*			

LIST OF PRACTICALS

1. Testing of bricks
   a. Shape and size
   b. Soundness test
   c. Water absorption
   d. Crushing strength
	CO1

2. Testing of concrete
   a. Slump test
   b. Compressive Strength of concrete cube
	CO2

3. Verification of Kirchhoff's Current and Voltage Laws in a dc circuit.	
4. Verification of dc circuits: a. Thevenin's theorem, b. Norton's theorem.	**CO3**
5. Verification of DC Circuit of superposition theorem.	**CO4**
6. Measurement of power and power factor in a single phase R-.L-.C. Circuit and calculation of active and reactive powers in the circuit.	**CO5**

Diploma in Mechanical Engineering					
Semester: **II**			Course Category: **ES**		
Course Code	Course	Period/Week			Credit
		L	T	P	C
DES126	**Introduction To IT System Lab**	**0**	**0**	**2**	**1**
Prerequisite	*At the end of this course, the students will be able to:*				
Course Outcome	**CO1**	*Identify Computer Hardware Components, Network Components and Peripherals.*			
	CO2	*Explain the role of an Operating System.*			
	CO3	*Install System and Application Software.*			
	CO4	*Explain the function of the system components including Processor, Motherboard and Input-output devices.*			
	CO5	*Use Word Processing Software to prepare document*			

INTRODUCTION TO IT SYSTEM LAB

1. Familiarization with Computer System and its peripheral devices. 2. Familiarization with Operating System.	**CO1**
3. Practice of internal and external commands of DOS. 4. Creation and Management (Rename, delete, search of file and folders).	**CO2**
5. Installing and uninstalling of news of twareusing control panel. 6. Installation of Operating Systems.	**CO3**
7. Changing System Date and Time. 8. User Account creation and its feature on Windows Operating System.	**CO4**
9. Internet browsing using browsers. 10. Using of Search Engine to get information from internet.	**CO5**